

WHAT IS CLAIMED IS:

CLAIMS

1. An acoustic attenuator comprising:

an intake air duct having an intake air duct opening leading to an outside  
5 environment and a blower fan opening leading to a blower fan wherein air is  
drawn through the intake air duct opening towards the blower fan; and

a primary reflecting panel disposed in the intake air duct, the primary  
reflecting panel being configured to reflect sound propagated from the blower fan  
away from the intake air duct opening.

- 10 2. An acoustic attenuator as recited in claim 1 wherein the primary reflecting  
panel is covered with acoustic absorbing material.

3. An acoustic attenuator as recited in claim 1 further including a secondary  
reflecting panel extending into the intake air duct from an edge of the intake air  
duct opening so that sound reflected inside the intake air duct toward the intake  
15 air duct opening is reflected back away from the intake air duct opening.

4. An acoustic attenuator as recited in claim 1 further including a secondary  
reflecting panel extending across the intake air duct opening and into the intake  
air duct so that sound reflected inside the intake air duct toward the intake air duct  
opening is reflected back away from the intake air duct opening.

5. An acoustic attenuator as recited in claim 1 further including a plurality of secondary reflecting panels extending into the intake air duct from edges of the intake air duct opening so that sound reflected inside the intake air duct toward the intake air duct opening is reflected back away from the intake air duct opening.

6. An acoustic attenuator module configured to be housed within an intake air duct having an intake air duct opening comprising:

an open end having sides configured to be attached to passageway leading from the intake air duct to a blower fan;

primary reflecting side configured to reflect sound propagating from the blower fan through the open end away from the intake air duct opening; and

an open side configured to allow air from the intake air duct opening to circulate around the module through the open side and the open end to the blower fan.

7. An acoustic attenuator module as recited in claim 6 further including secondary reflecting sides configured to reflect sound propagating from the blower fan through the open end away from the intake air duct opening.

8. An acoustic attenuator module configured to be housed within an intake air duct having an intake air duct opening comprising:

an open end having sides configured to be attached to passageway leading from the intake air duct to a blower fan;

an open side configured to allow air from the intake air duct opening to circulate through the module through the open end to the blower fan; and

a primary reflecting plate offset from the open side to block noise propagated from the blower fan from propagating through the open side.

5        9.        An acoustic attenuator module as recited in claim 8 further including acoustic absorbing material disposed between the open end and the open side and configured to attenuate noise propagated from the blower fan.

10       10.       An acoustic attenuator module as recited in claim 8 further including acoustic absorbing material disposed between the open end and the open side and configured to deflect sound passing into the module around the primary reflecting plate.

11.       An acoustic attenuator module as recited in claim 8 further including a secondary reflecting plate configured to reflect sound propagating around the primary reflecting plate from the blower away from the open side.

15       12.       An acoustic attenuator module as recited in claim 8 further including a plurality of secondary reflecting plates configured to reflect sound propagating around the primary reflecting plate from the blower away from the open side.

13.       An acoustic attenuator module as recited in claim 8 further including a secondary reflecting plate extending across the open side and inside the module.

14. An acoustic attenuator module as recited in claim 8 further including a plurality of secondary reflecting plates extending across the open side and inside the module.

5 15. A method of attenuating sound propagating from a blower fan into a living space through an intake air duct having an intake air duct opening comprising:  
reflecting sound propagated from the blower fan away from the intake air duct opening using a primary reflecting panel in the intake air duct.